

100 days Marzburg

M. Marz

University of Marburg

Bled, Slovenia

20.02.2010 (50 days after 0)

Introduction into horse-trade networks

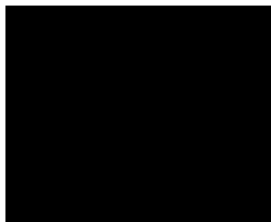
- Known (at least) since September 2002

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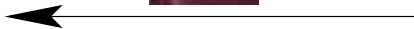
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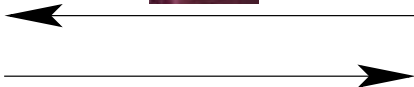
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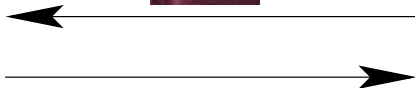
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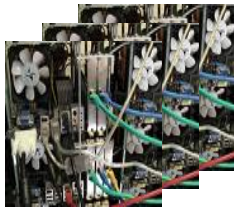
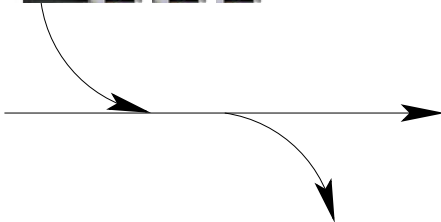


Shopping

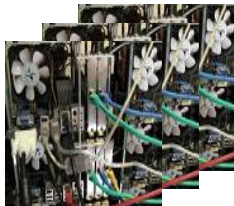
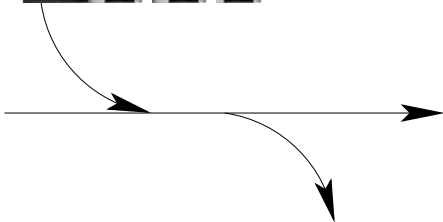
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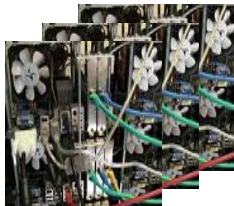


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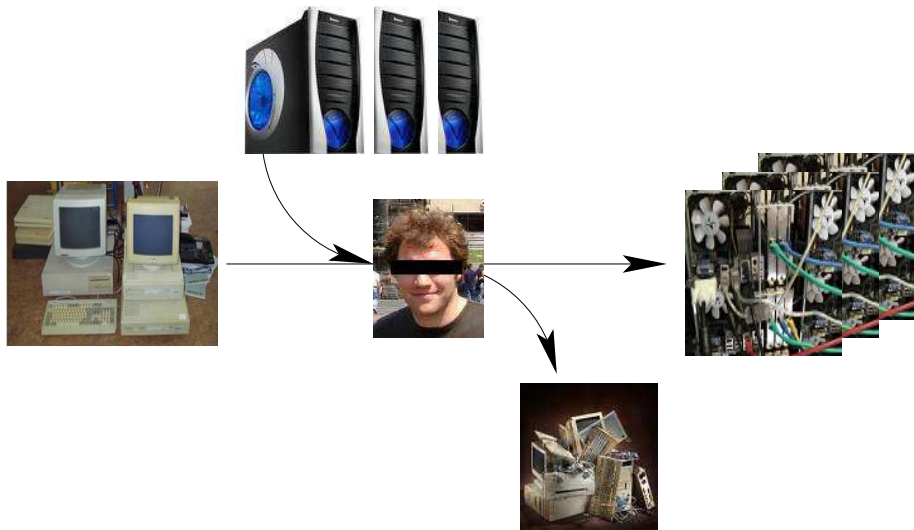
2 Euro per Item

Shopping



2000 Euro per Computer

Handicrafts



Hide and Seek

Hide and Seek

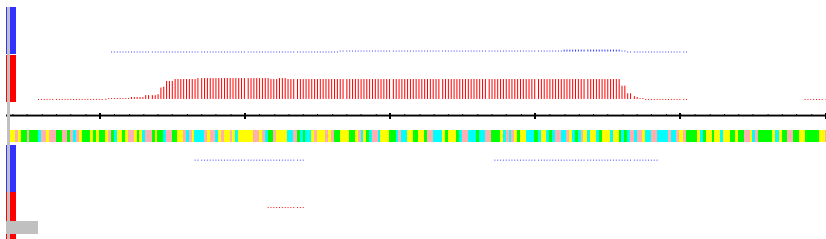
- *Aquifex aeolicus*

Hide and Seek

- *Aquifex aeolicus*
- Protein components
- RNase P ?

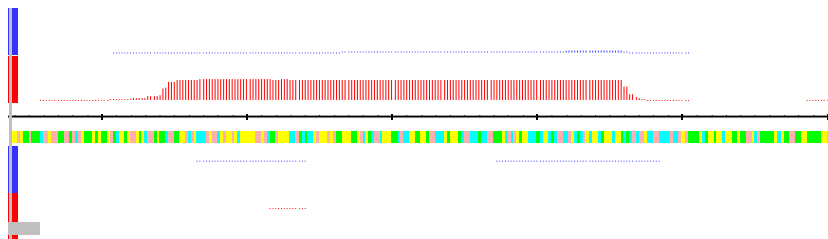
Hide and Seek

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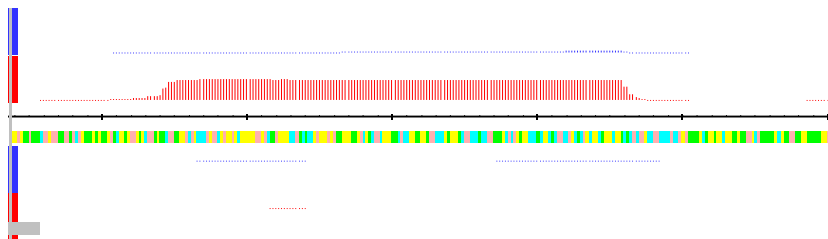
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- Read mapping

Hide and Seek

- *Aquifex aeolicus*
- Protein components
- RNase P ?



- Read mapping
- Antisense reads flanking known ncRNAs

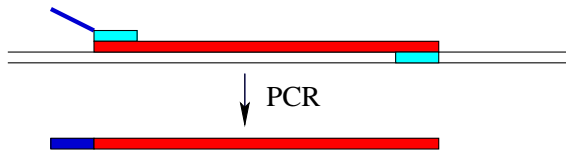
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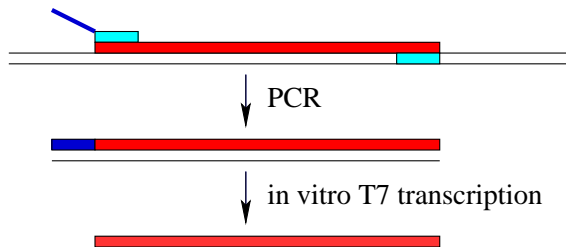
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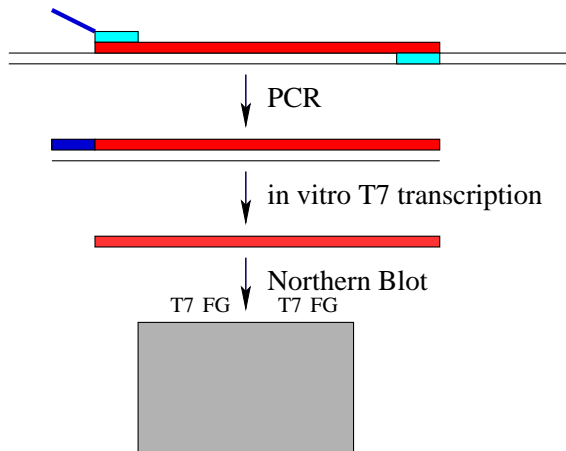
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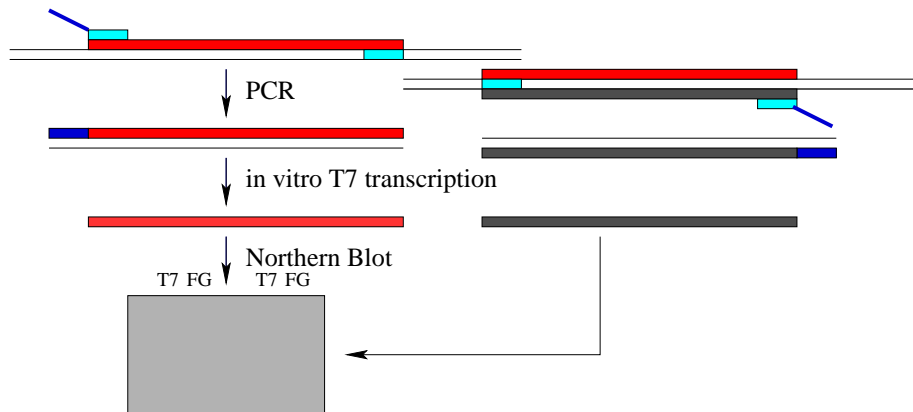
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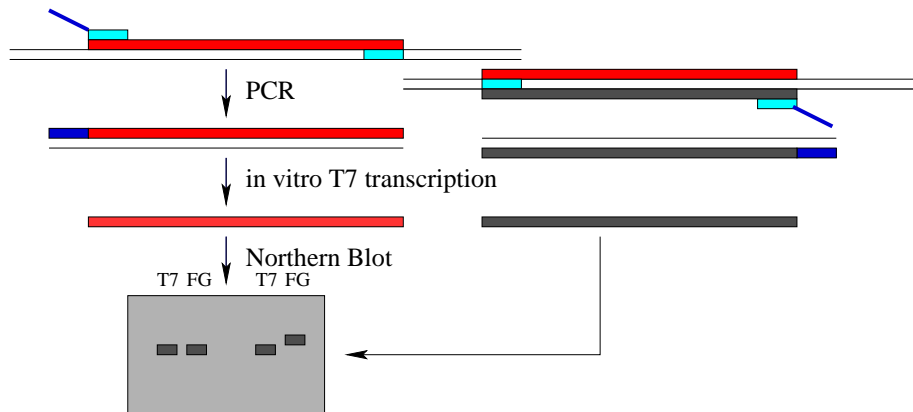
Hide and Seek



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Hide and Seek



Phone Calls (Skype)

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- Axel Mosig (Shanghai)
- Fragrep III

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```
GAAA.GUCCCUUGACCCGA..GGCC..GAAAC...GCCU
GAAA.GUCCCUUGACCCGUU..GGCC..GAAAG...GCCC
GAAA.GUCCCUUGACCU...CGGGCUGAGAGAGUCCGC
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GAAA.GUCCCGGACAA...ACUUU.G.CAG.A.AAGU
```

Phone Calls (Skype)

- Axel Mosig (Shanghai)
- Fragrep III
- Input: stk-file
- Conserved Regions (Covariance Model)
- Vienna RNA Package (MFE Range)
- Stem length ranges
- Distance ranges

```
GAAA.GUCCCUUGACCCGA..GGCC..GAAAC...GCCU
GAAA.GUCCCUUGACCCGUU..GGCC..GAAAG...GCCC
GAAA.GUCCCUUGACCU...CGGGCUGAGAGAGUCCGC
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GAAAAGUCCCGAACCUAU..GGUA..GAAA...UACU
UAAA.GUCCCUGUACUAUAGUACAGG.GAUU..U.UUGA
GAAA.GUCCCGGACAA...ACUUU.G.CAG.A.AAGU
.....<<<<<<.....>>>>>>
PPPPPPPPPP.....8888.....8888
GAAA.GUCCCUUGACCCGA..GGCC..GAAAC...GCCU
GAAA.GUCCCUUGACCCGUU..GGCC..GAAAG...GCCC
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GAAA.GUCCCGGACAA...ACUUU.G.CAG.A.AAGU
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A Game of Go

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- oldest board game on earth (>2000 years)

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- 19x19 grid, w/b stones placed on vertices

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- most efficient method: Monte Carlo (partly)

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- most efficient method: Monte Carlo (partly)
- bronze to sweden!
valkyria by (Magnus Persson)

A Game of Go

Strength

Weakness

A Game of Go

Strength

Weakness

- local fights
- life and dead
- endgame
- Small board game situations

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Weakness

- “Feeling”
- Direction
- Full board game situations

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WHY?

A Game of Go

Strength

- local fights
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Weakness

- “Feeling”
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- Full board game situations

WHY?

MC: statistically evaluable

Limit: Time/Memory

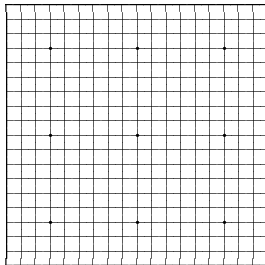
A Game of Go

Correct?: Play where most space is left.

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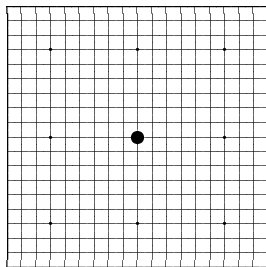
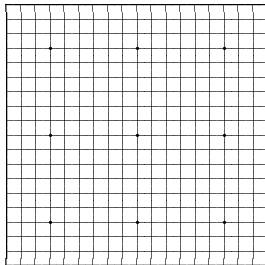
Example: Empty board



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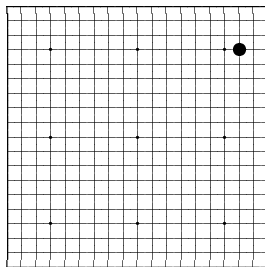
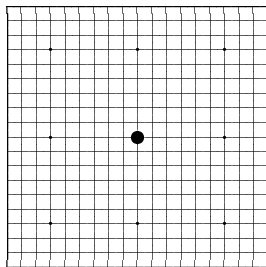
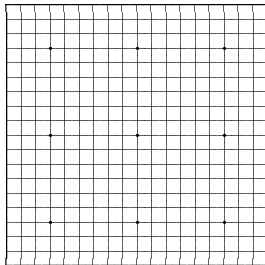
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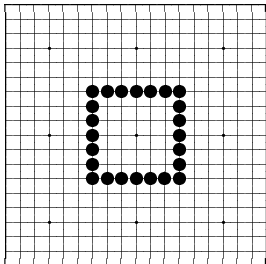
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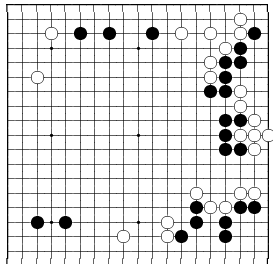
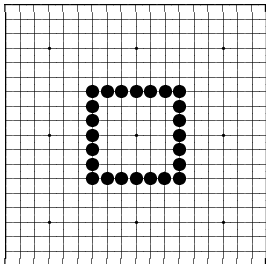
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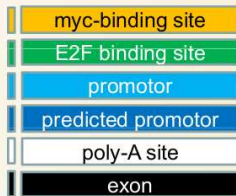
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IKEA Party

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Chromosome 13, ORF 25

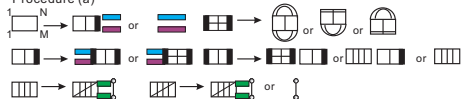


MIRHG1-001 function: ?

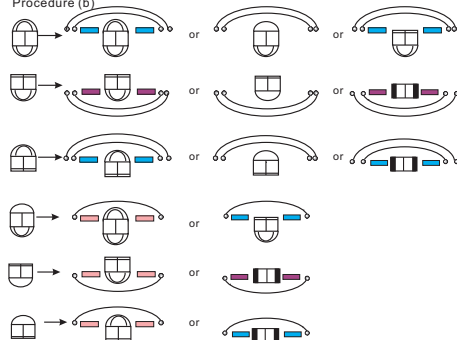
Writing emails to friends

Writing emails to friends

Procedure (a)



Procedure (b)



Average of loop energies
(uniformly distributed)

Alcohol receipts

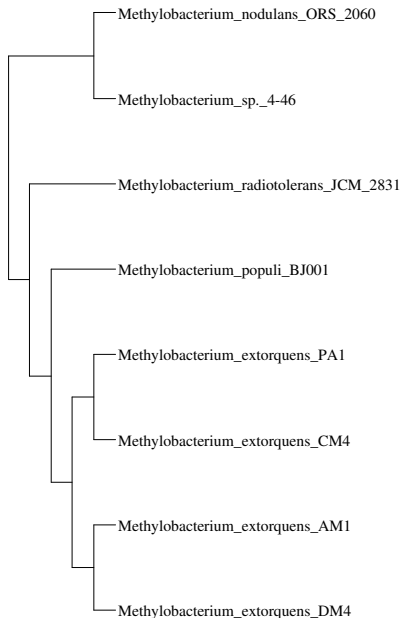
Alcohol receipts

Methanol poisoning → Ethanol iv.

Alcohol receipts

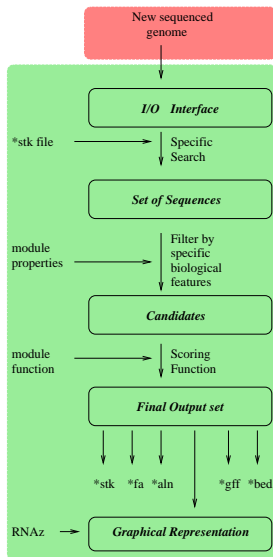
Methanol poisoning → Ethanol iv.

RNAz 0.5 Loci	6553
RNAz 0.9 Loci	2881
Coding genes in <i>M. extroquens</i> DM4	5947
Noncoding genes	88

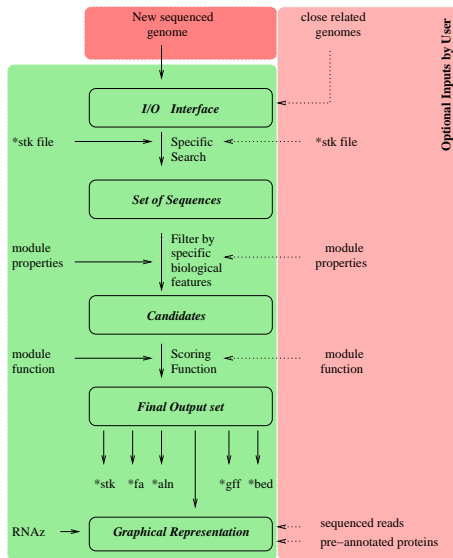


Sci-Fi tale

Sci-Fi tale



Sci-Fi tale



Check HRZ reaction

Check HRZ reaction

Number of Eukaryotic Genomes	556
Number of Eukaryotic Finished	94
Number of Eukaryotic Unfinished	462
Number of Bacterial Genomes	1027

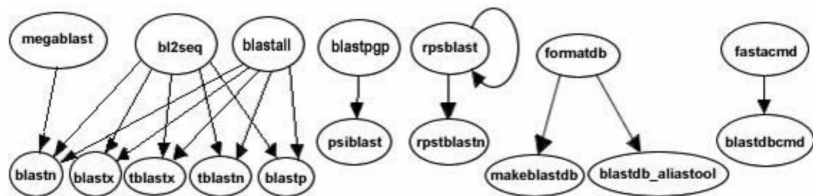
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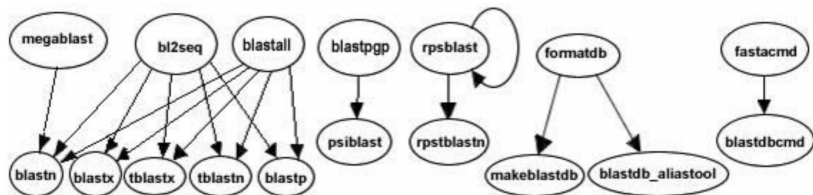
2 Terrabyte Download in 2 days :)

Blast

Blast



Blast



- Strategy files (for parameters)
- Modularized
- Query splitting:
faster for larger DB, Lookup-Table in L2 Cache passt
- Masking
- Custom Output Formats

50 slides - 50 days: Summary

- Horse trade
- Shopping
- Handicrafts
- Hide and Seek
- Phone Calls
- Go Games
- IKEA Party
- Writing emails to friends
- Alcohol consume
- Sci-Fi tale
- Games with HRZ
- Blast

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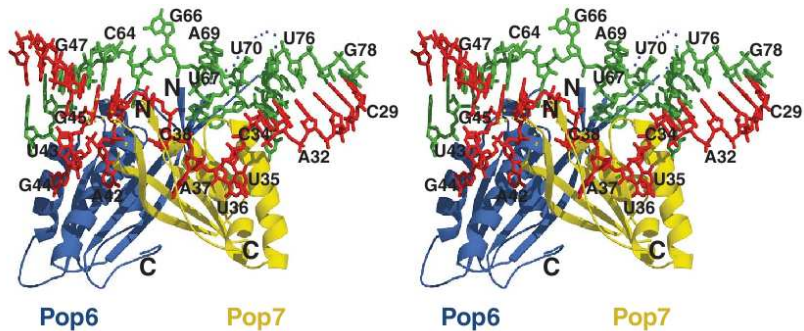
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- Protein-RNA Interaction

RNA:Protein interaction¹



¹Perederina et al (2010)

